

Executive Summary

Local Jobs and Income from Mineral Exploration

A Case Study of the Pebble Exploration Project

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From 2002 until 2013, the Pebble Mineral Exploration Project explored a big deposit of mostly copper, but also gold and molybdenum, in the Bristol Bay region of Southwest Alaska, about 17 miles northwest of Iliamna (Figure S-2). That exploration stopped in 2013, when a major project partner withdrew. But before that, developers spent millions of dollars, and in the last years of exploration annually employed more than a hundred residents of Bristol Bay communities.

This paper describes jobs and income the residents of 18 communities—in the Lake and Peninsula Borough, the Bristol Bay Borough, and the Dillingham census area—got from 2009 through 2012, the last full year of exploration. Most residents of these communities are Alaska Native, and the communities are small—most with populations considerably smaller than 500—except for Dillingham, where nearly 2,500 people live (Table S-1).

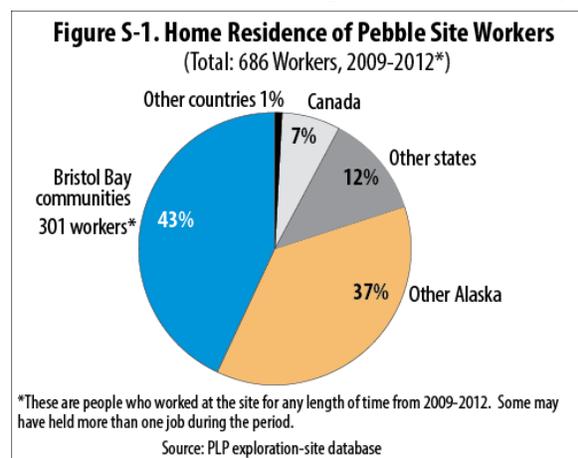
How local communities can capture more economic benefits from rural resource projects is an important question in Alaska, and the Pebble exploration project offers a useful case study. But we want to emphasize that we're neither advocating nor opposing a potential mine at the Pebble site. The proposed mine has been enormously controversial in Alaska and elsewhere, because of its proximity to the world-class Bristol Bay salmon fisheries. We looked only at local jobs and income exploration created, to shed light on the potential for resource development projects to help rural economies. Our analysis is based on data from Pebble Limited Partnership's exploration-site database, augmented with information from contractors. What did we find?

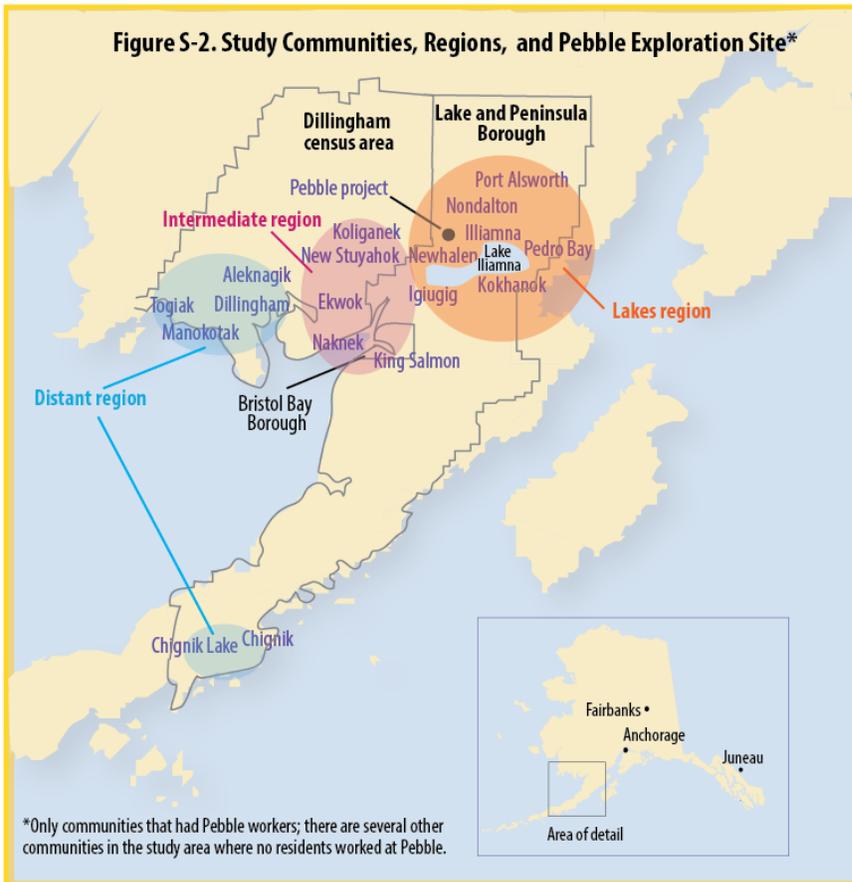
- *About 43% of those who worked at the Pebble exploration site anytime from 2009 through 2012 were from the Bristol Bay area.* That amounted to about 300 local residents who worked at the site some time during the study period (and may have held more than one job over the years). Another 37% of workers were from elsewhere in Alaska, and the remaining 20% were mainly from other states or Canada (Figure S-1).

- *The number of workers from Bristol Bay increased over the study period, and so did employee retention.* In 2009, 111 local residents worked at the Pebble site, increasing to 157 by 2012. More employees also stayed on the job from one year to the next, with retention at just over half from 2009 to 2010, climbing to two-thirds from 2011 to 2012 (Figure S-3).

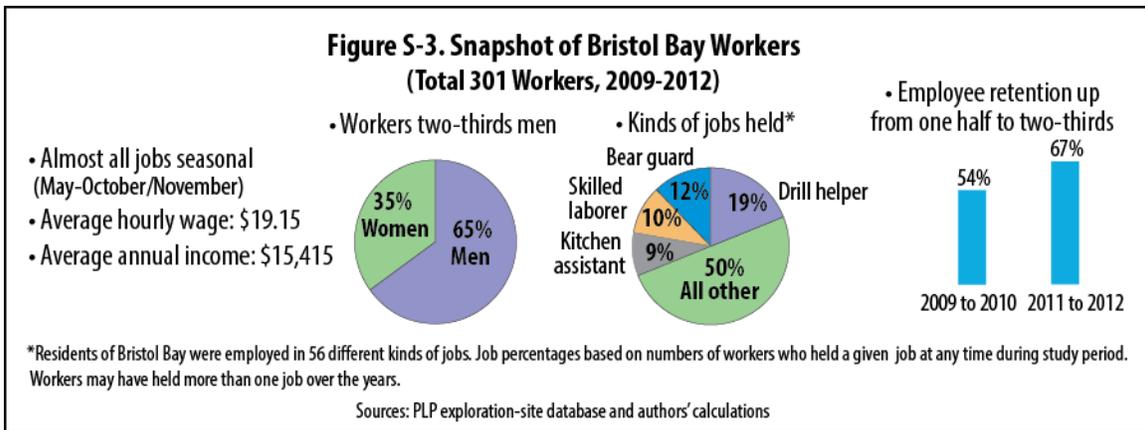
- *Bristol Bay residents worked at 56 kinds of jobs in the study period, almost all seasonal.*

The most common jobs they held were drill helper, bear guard, and skilled laborer. The average hourly pay was about \$19, and most workers earned on average about \$15,000 a year from those mostly seasonal jobs. About 65% of workers were men and 35% women (Figure S-3).



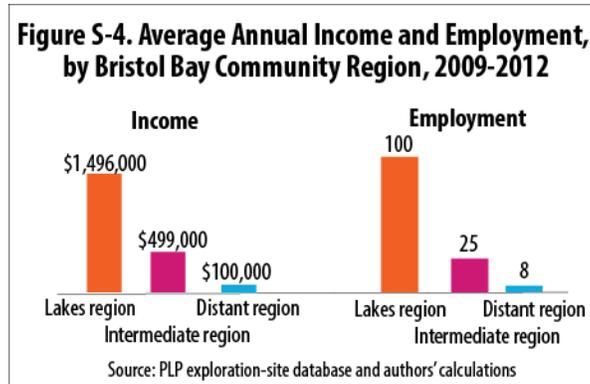


Region	Population
Lakes Region	884
Igiugig	50
Iliamna	109
Kokhanok	170
Newhalen	190
Nondalton	164
Pedro Bay	42
Port Alsworth	159
Intermediate Region	1,900
Ekwok	115
King Salmon	374
Koliganek	209
Naknek	544
New Stuyahok	510
Other Communities	148
Distant Region	4,589
Aleknagik	219
Chignik	91
Chignik Lake	73
Dillingham	2,329
Manokotak	442
Togiak	817
Other communities	618



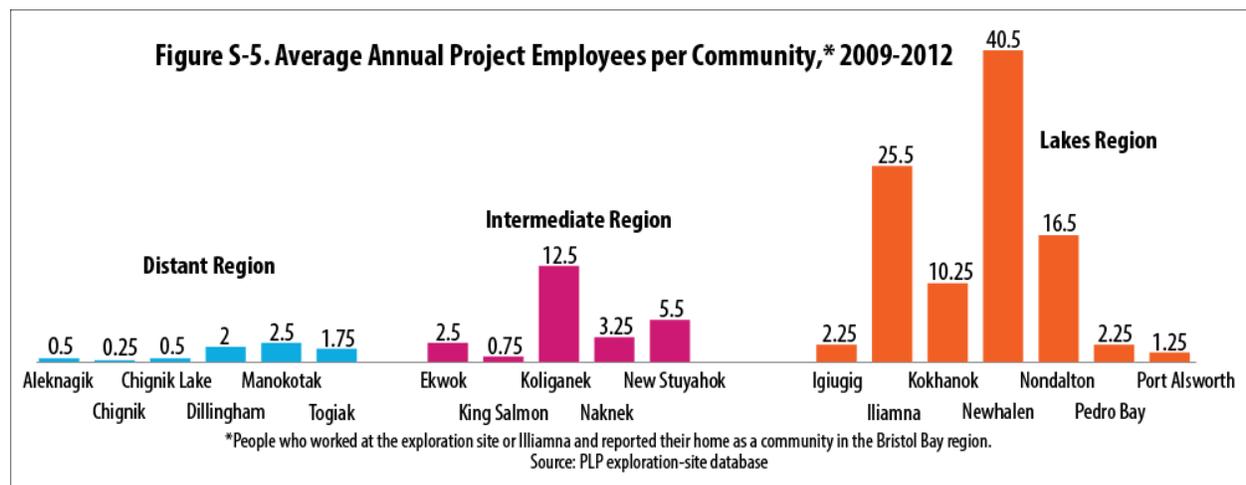
• Communities closest to the exploration site got several times more jobs and income than those farther away. We grouped the study communities into three regions, based on their proximity to Pebble. Communities closest to the site are mostly around Lake Iliamna, and on average per year about 100 workers came from what we call the Lakes region. About 25 a year were from the

Intermediate region and 8 from the Distant. On average, workers from the Lakes region collected a total of nearly \$1.5 million a year, compared with \$499,000 for those from the Intermediate region and \$100,000 among those from the Distant region, where communities are more than 100 miles from the Pebble site (Figures S-2 and S-4).

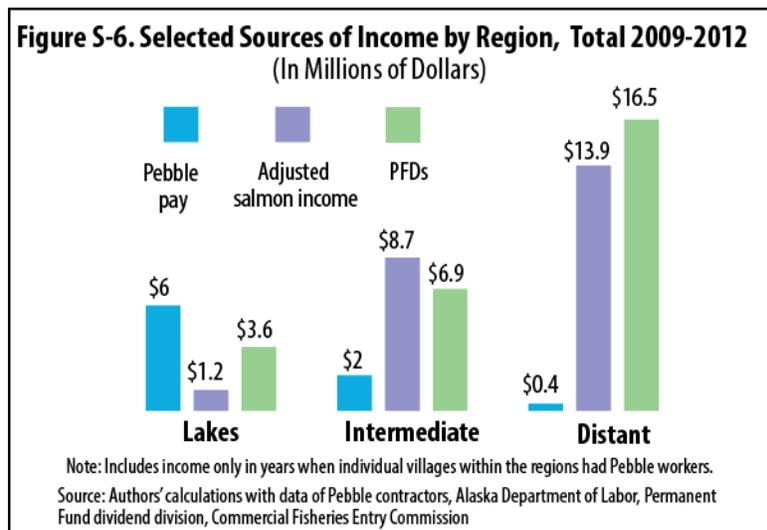


- *In the Lakes region, where communities are very small (Table S-1) exploration employment was a large share of total employment: approximately 14% of the total workforce from Lakes communities worked at the site during the study period. The regions farther from the exploration site, which have larger populations, saw much smaller employment effects: 3% of the total workforce from the Intermediate region and barely above 0% from the Distant region.*

- *Even within individual regions, community employment at Pebble varied significantly. Iliamna, where exploration operations were based, and Newhalen (with road access to Iliamna) had the most employees—an annual average of 40 in Newhalen and about 25 in Iliamna, followed by Nondalton with about 16. Outside the Lakes region, the only community with more than an average of 10 workers a year was Koliganek. But even within the Lakes region, not all communities had a significant number of workers—Port Alsworth and Pedro Bay had fewer workers than some places in the Distant region (Figure S-5).*



- To get a sense of what Pebble income meant to the region, we compared it with income from two important sources: commercial fishing and Permanent Fund dividends. The exploration project brought more income into the Lakes region from 2009 through 2012 than did either commercial salmon fishing or Permanent Fund dividends. But the Intermediate and Distant regions have more people, rely more on salmon fishing, and had fewer residents working at Pebble—so Pebble pay in those regions was a much smaller source of income. As Figure S-6 shows, income from Pebble in the Lakes region from 2009-2012 was several times more than from salmon fishing and two-thirds more than from Permanent Fund dividends. By contrast, in the Intermediate region Pebble pay was significantly less than from either commercial fishing or PFDs—and in the Distant region it was an insignificant amount compared with the other sources.



What can the Pebble case study tell us about the potential for rural development projects to benefit local economies?

- *Residents of Bristol Bay communities and other Alaska places were able to capture a big share of exploration jobs and income.* During the study period, 43% of workers were from Bristol Bay communities and another 37% were from elsewhere in Alaska. A number of things contributed to this high local-hire rate, including Pebble's local hire coordinator; its work with the state government to get training programs and with non-profits to help qualify local residents for jobs; and its contracts with local Native village corporations and other businesses.
- *Jobs and income going to Bristol Bay residents increased significantly between 2009 and 2012.* Partly that's because the developer was spending more for exploration, creating more jobs. But the number of qualified job applicants from the Bristol Bay region also increased over time. Pebble personnel report that by 2010 or 2011, there were more qualified Bristol Bay residents looking for jobs than there were jobs available.
- *Proximity made a difference: even though most project employees from all communities were housed at project headquarters in Iliamna, residents from the villages closest to the project site got more jobs.* From 2009 through 2012, an average of about 100 residents per year from the Lakes region worked at the project site—about 14% of the total workforce from seven small villages. Prospective workers from places farther away may have taken into account how difficult it would be to travel home for time off work